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Natural Resources Conservation Service

Idaho Basin Outlook Report May 1, 2000

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http://idsnow.id.nrcs.usda.gov/

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

IMPORTANT NOTICE - REVISION OF MAILING LIST

The Idaho Basin Outlook Report is published and distributed as a public service by the USDA, Natural Resources Conservation Service from January to May each year. The June report is not mailed to recipients and is available via the Internet. In order to maintain current mailing information, control the cost of this publication and ensure maximum use of the information, we are required to examine our circulation annually. This notice is required by the congressional joint committee for the annual revision of free mailing lists.

The Idaho Basin Outlook Report is available on the Internet at http://id.nrcs.usda.gov/ and allows you to obtain the Basin Outlook Reports several days before you receive it in the mail. Additional water supply products and most current snowpack information are also available on the Internet.

Please mark the box [ ] for the BASIN REPORT(S) you would like to receive. If you check more than one basin you will automatically receive the report for all basins.

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[ ] #2 - Clearwater River Basin

[ ] #3 - Salmon River Basin

[ ] #4 - Weiser, Payette, Boise River Basins

[ ] #5 - Wood and Lost River Basins

[ ] #6 - Upper Snake River Basin

[ ] #7 - Southside Snake River Basins

[ ] #8 - Bear River Basin

[ ] - Annual Data Summary Report - published after each water year: contains individual snow course measurements, snow water equivalent and precipitation data from SNOTEL (SNOw TELemetry) stations, and the 1961-90 averages.

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IDAHO WATER SUPPLY OUTLOOK REPORT

May 1, 2000

SUMMARY

Warm, moderate air temperatures are allowing the snow to melt 2-3 weeks earlier than normal and one month earlier than last year. The warm daytime temperatures and near freezing night temperatures are generating moderate melt rates of one inch per day. This is a gradual melt rate allowing snowmelt water to infiltrate into the ground to recharge the depleted soil moisture after last summer's extremely dry summer and fall. Streamflow levels rose last month but not as much as expected based upon the amount of snow that has melted. As a consequence, streamflow forecasts have decreased for the remaining runoff period. The Most Probable Forecast numbers (50% Chance of Exceeding) may be an optimist number. Water users may wish to use the "Drier Future Conditions" Forecasts (90% or 70% Chance of Exceeding) especially if the dry spring and warm weather we are currently experiencing is any indication of the future weather outlook. Some southern Idaho high desert streams peaked in April, others may peak in early May due to the warm weather and lack of snow remaining in the high country. Streams will return to summer baseflows earlier than normal and remain near or below normal for the remaining summer months.

On the positive side, many of Idaho reservoirs are full or near full and will help overcome below normal runoff volumes. Idaho's farmers and irrigators with reservoir storage in the Payette, Boise, Little Wood, upper Snake and Bear river basins should have adequate water supplies. Irrigators in Big Wood, Big Lost, Little Lost, Birch Creek, and Mud Lake area, Salmon Falls, Oakley basins other southern Idaho irrigators who do not have reservoir storage may have a marginal water supply and experience water shortages later this summer.

SNOWPACK

Snowmelt is in full swing across the state. Southern Idaho snow measuring stations are melting 2-3 weeks earlier than normal. Northern Idaho stations are melting 1-2 weeks earlier than normal. Many low elevation snow measuring sites are melted out. Snowpacks vary across the state due to the melting, but the greatest percentages can still be found in the Panhandle Region at 82% of average, followed closely by the Clearwater basin at 76%. The snowpack across central Idaho, in the triangle formed by the Salmon, Payette, and upper Snake basins, ranges from 55-65% of average. A few exceptions are the Weiser, Camas, and Portneuf basins which are 40% of average. The Little Lost, Snake River above American Falls Reservoir, and Bear River basins are half of normal. The Willow Creek and Blackfoot basins are melted and have the least amount of snow since 1992. The Owyhee basin snowpack is 16% of average while the Salmon Falls and Goose-Trapper (Oakley) basins are only slightly better at 37%. Many SNOTEL sites in Idaho that still have snow, have the least amount of snow water for May 4 since 1994 or 1992.

PRECIPITATION

For the second consecutive month, the Panhandle received normal precipitation. April precipitation ranged from 75-85% of average across central and southern Idaho. The least amount of precipitation, as a percent of average, was 60% in the Bear River basin, followed closely by the Clearwater basin and upper Snake at 67% of the normal April amounts. Water year to date precipitation is below normal across the southern two-thirds of the state. The highest amounts are in the Panhandle Region at 108% of average and Clearwater basin at 101%. The upper Snake and Bear River basins have received only about three-quarters their normal precipitation amounts this water year. Elsewhere, in the state water year to date amounts are in the 82-93% of average range.

RESERVOIRS

Idaho's major reservoirs are expected to fill and remain the bright spot in Idaho's water supply picture this year. Magic, Little Wood, Arrowrock, Henrys Lake, Island Park and American Falls are full. Other reservoirs are 80-90% full. The exception is Oakley Reservoir at 60% full, 118% of average, and Salmon Falls Reservoir at 41% full, 92% of average. Reservoir operators are reducing outflows to ensure filling.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

The early snowmelt resulted in above normal April streamflow volumes across most of the state with the exception of some streams in eastern and southern Idaho. The Owyhee and Bruneau streams peaked in April. Water users are still waiting to see if Salmon Falls, Goose, and Trapper creeks are going to increase again; they rose some last month, but not as much as expected with the amount of snow that melted. Streamflow forecasts decreased from last month and now range from 70-100% of average in the Panhandle, Clearwater, Salmon, Payette, Boise and upper Snake rivers. The Big Wood, Little Wood, Big Lost, Bear and rivers south of the Snake River are forecast at 40-65% of average. Water users should expect below normal stream levels later this summer after streams return to baseflow levels. The combined effects of an early melt and below normal snowpacks means a shorter high water season and early returns to baseflow levels.

CURRENT ACTIVITIES IN SNOW SURVEY

Twin Falls Soil & Water Conservation District 45 Annual Water Forecast Meeting – Morley Nelson, Boise Idaho Snow Survey Supervisor from 1948-1972, returned to meet with the Salmon Falls Canal Company water users. Forty-five springs ago Morley stood in front of a crowd of farmers and gave them a streamflow forecast for the Salmon Falls River. That was the first time farmers on the perennially water-short tract had a scientific-based prediction of the amount of irrigation they'd have available for the season. Many farmers remembered Morley because he was the first person to say there would be a "drought" even though it was raining outside. Morley's job in 1948 was to coordinate and start the snow survey measurement program in the Columbia River Basin. Many of the sites he located are still measured today or have been automated as part of the NRCS SNOTEL Data Collection Network.

NRCS Field Office Snow Surveyors provided the snow survey equipment and winter expertise in collecting core samples of the snow for Lyn Benjamin. Lyn is a consulting hydrologist leading the Henrys Fork spring recharge project and eastern Idaho precipitation study which are funded by the USBR, USGS, INEEL, Utah State University, Henry's Fork Watershed Council and Henry's Fork Foundation. Snow core samples were collected last year and this year at several snow measuring sites for water quality (stable isotope) analysis. The studies include combining physical data (snow core samples and discharge data) and environmental isotope investigations to assess spring recharge areas, flow paths and residence time.

NRCS is Investigating Possible New Streamflow Forecasts:
NRCS Snow Survey Personnel met with Boundary Soil Conservation District and Boundary County and uncovered the need for snowpack and streamflow forecast information for the Kootenai River tributaries in Boundary County. The NRCS Colombia River Basin Forecast Hydrologist is investigating the possibility of forecasting Smith Creek, Boundary Creek and Moyie River, and also as a previous request for the Corps of Engineers, recently developed new forecast equations for the Kootenai River at Leonia and at Libby Dam.

Our NRCS Forecast Hydrologist just developed a forecast equation for Idaho Department of Water Resource and the Camas Creek/Mud Lake water users to assist in their water rights allocation. NRCS has also received requests and is investigating possible streamflow forecasts for the Camas Creek, Birch Creek and Middle Fork Salmon River to assist these water users.

May 3, 2000 Boise Basin Snowline Flight:
Personnel from NRCS, Corps of Engineers and Bureau of Reclamation conducted a snowline flight to assist in the water management of the Boise Reservoir System. Snowline elevation was about 7,200 feet, 19% snow covered. Additional information and photos are available on our Web page: http://idsnow.id.nrcs.usda.gov/snow/mss.htm

IDAHO SURFACE WATER SUPPLY INDEX (SWSI)
As of May 1, 2000

The Surface Water Supply Index (SWSI) is predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

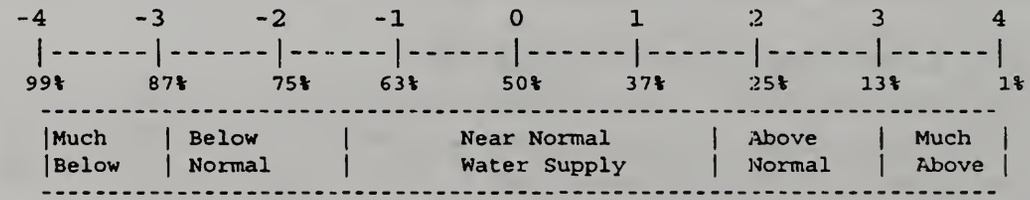
SWSI values are published January through May, and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US Department of Commerce, National Weather Service
US Bureau of Reclamation
Idaho Water Users Association
US Army Corps of Engineers
Idaho Department of Water Recourses
PacifiCorp

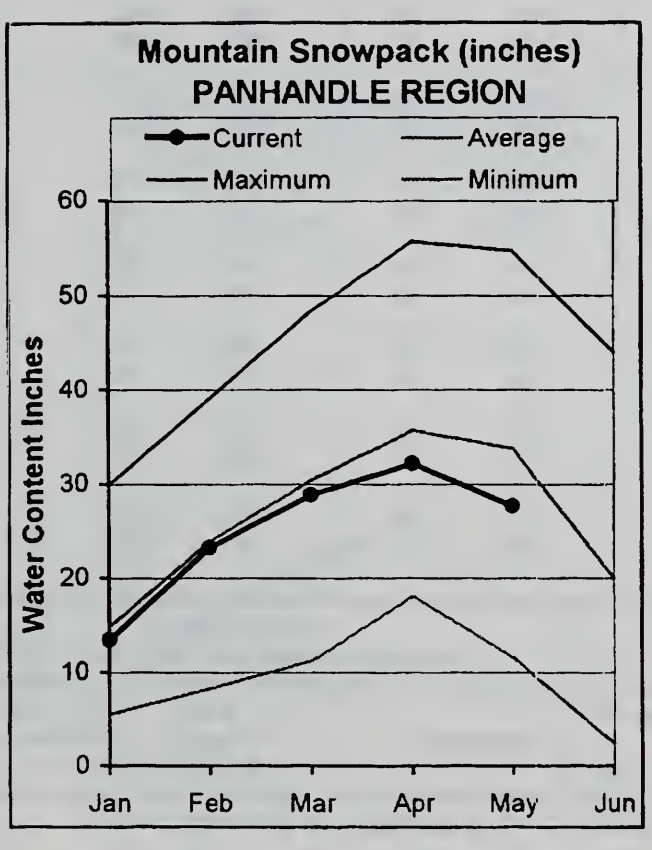
BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-1.3	1993	NA
CLEARWATER	-1.3	1995	NA
SALMON	-1.2	1995	NA
WEISER	-0.7	1989	NA
PAYETTE	-1.1	1989	NA
BOISE	-1.1	1985	-2.6
BIG WOOD	-1.2	1981	-1.4
LITTLE WOOD	-0.8	1981	-2.1
BIG LOST	-1.7	1987	-0.8
LITTLE LOST	-1.1	1991	0.0
HENRYS FORK	-2.0	1991	-3.3
SNAKE (AMERICAN FALLS)	0.1	1993	-2.0
OAKLEY	0.4	1995	0.0
SALMON FALLS	-0.3	1989	0.0
BRUNEAU	-2.0	1991	NA
OWYHEE	0.3	1998	NA
BEAR RIVER	-0.4	1987	-3.8

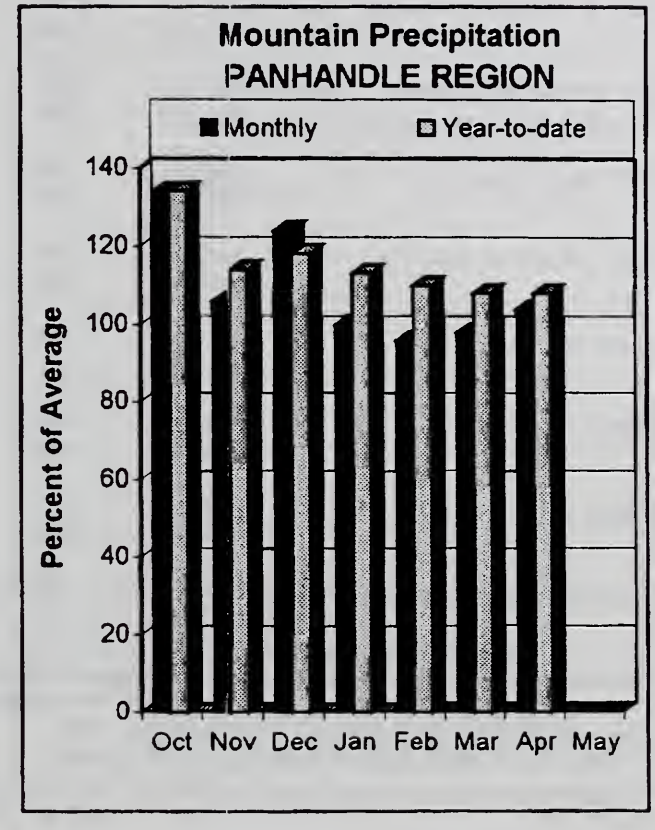
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION



Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply", represents three SWSI units and would be expected to occur about one third (36%) of the time.

PANHANDLE REGION
MAY 1, 2000





WATER SUPPLY OUTLOOK

For the seventh month in a row, monthly precipitation has been near normal or better in the Panhandle Region. Precipitation for the water year remains the highest in the state at 108% of average. The highest snowpacks in the state are also in the Panhandle Region ranging from 99% of average in the Priest River basin to 76% in the Coeur d'Alene and Pend Oreille river basins. Several inches of rain in mid-April were enough to generate rises in streamflows. Outflows from Coeur d'Alene Lake were about 25,000 cfs, which will probably be the peak for the season unless much wetter weather returns. Streamflow forecasts range from 80-100% of average. Snowpacks in basins that are near normal will help provide adequate summer baseflows for river users.

PANHANDLE REGION
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at: Leonia (1,2)	MAY-JUL	5660	6186	6425	101	6664	7190	6390
	MAY-SEP	6549	7134	7400	99	7666	8251	7466
CLARK FK at: Whitehorse Rpds (1,2)	MAY-JUL	6518	7764	8330	83	8896	10142	10020
	MAY-SEP	7242	8633	9265	83	9897	11288	11200
PEND OREILLE Lake Inflow (1,2)	MAY-JUL	7235	8579	9190	83	9801	11145	11070
	MAY-SEP	8030	9522	10200	83	10878	12370	12290
PRIEST near Priest River (1,2)	MAY-JUL	526	603	638	102	673	750	626
	MAY-SEP	558	650	692	102	734	826	679
COEUR D'ALENE at Enaville	MAY-JUL	288	359	407	86	455	526	472
	MAY-SEP	320	394	445	87	496	570	512
ST.JOE at Calder	MAY-JUL	568	650	706	80	762	844	881
	MAY-SEP	616	702	760	80	818	904	949
SPOKANE near Post Falls (2)	MAY-JUL	1048	1281	1440	83	1599	1832	1746
	MAY-SEP	1112	1355	1520	83	1685	1928	1840
SPOKANE at Long Lake	MAY-JUL	1227	1494	1675	85	1856	2123	1972
	MAY-SEP	1408	1689	1880	86	2071	2352	2195

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2323.0	2009.0	2043.0
FLATHEAD LAKE	1791.0	1064.0	884.6	937.2
NOXON RAPIDS	335.0	320.6	323.6	208.7
PEND OREILLE	1561.3	934.5	916.5	927.0
COEUR D'ALENE	238.5	334.5	284.5	246.7
PRIEST LAKE	119.3	109.8	107.0	97.9

PANHANDLE REGION
Watershed Snowpack Analysis - May 1, 2000

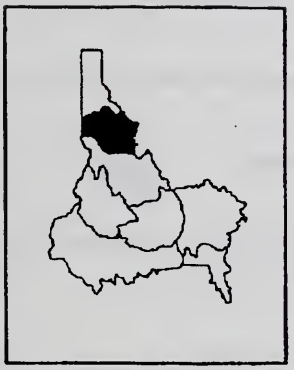
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	33	66	88
Moyie River	11	64	87
Priest River	5	60	99
Pend Oreille River	91	64	76
Rathdrum Creek	1	50	92
Hayden Lake	0	0	0
Coeur d'Alene River	7	67	87
St. Joe River	3	64	76
Spokane River	10	66	84
Palouse River	1	0	0

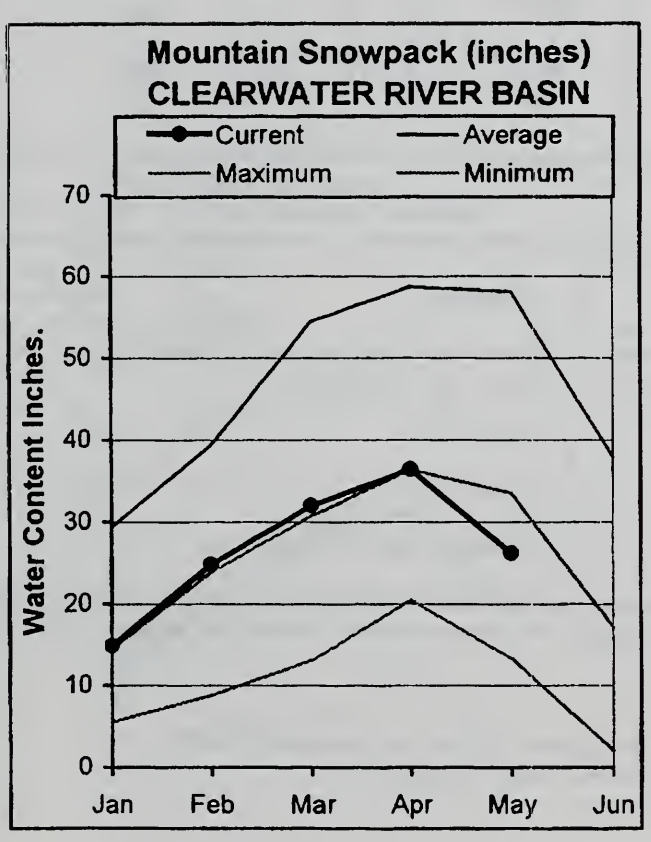
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

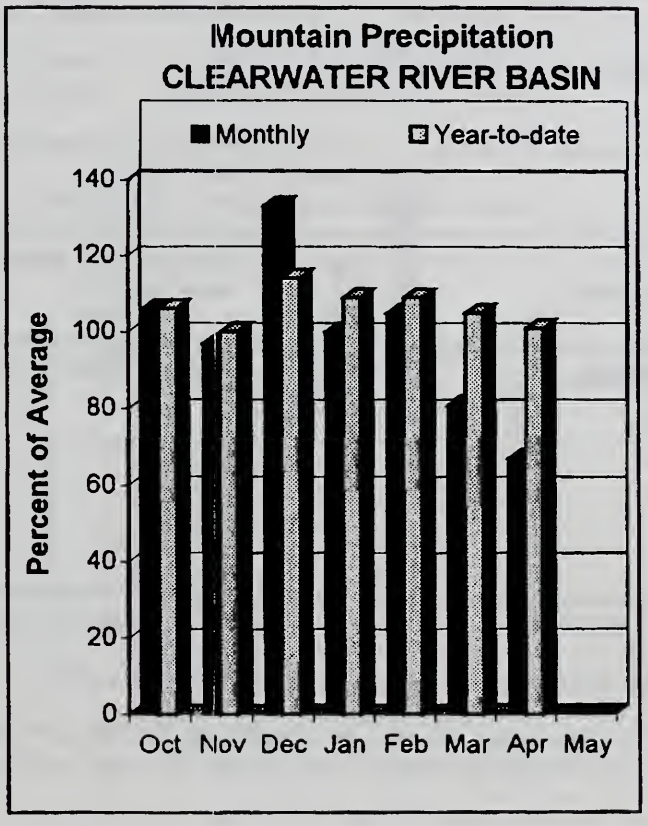
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN
MAY 1, 2000







WATER SUPPLY OUTLOOK

Precipitation was only 67% average in April and is normal since the water year started on October 1, 1999. Warm temperatures have also caused an earlier than normal melt in the Clearwater basin. Mountain Meadows SNOTEL, located at 6,360 feet along the Clearwater and Salmon basin divide, has the third lowest May 4 snow water content since daily records started in 1981. Only years, 1994 and 1992 had less snow water and also peaked at a lesser amount. Snowpack percentages range from 58% of average on the Selway basin to 83% on the North Fork Clearwater. Overall, the Clearwater basin is 76% of average, down from 97% a month ago. Dworshak Reservoir is two-thirds full and will fill this year. Streamflow forecast call for 79% of average for Dworshak Reservoir Inflow, and 88% for the Clearwater River at Spalding. With snowmelt in full swing, there is still a chance for higher peak streamflows in early May, but the chance decreases as more and more snow melts and streams start returning to baseflow levels.

CLEARWATER RIVER BASIN
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DWORSHAK RESV INFLOW (1,2)	MAY-JUL	1139	1463	1610	79	1757	2081	2028
	MAY-SEP	1267	1606	1760	80	1914	2253	2200
CLEARWATER at Orofino (1)	MAY-JUL	2659	3093	3290	86	3487	3921	3826
	MAY-SEP	2876	3353	3570	87	3787	4264	4087
CLEARWATER at Spalding (1,2)	MAY-JUL	4155	4901	5240	88	5579	6325	5972
	MAY-SEP	4409	5208	5570	87	5932	6731	6405

CLEARWATER RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2360.8	1529.3	2309.0

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - May 1, 2000

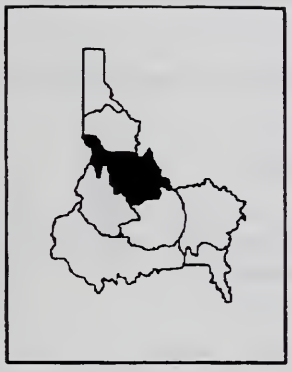
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	63	83
Lochsa River	2	50	65
Selway River	4	54	58
Clearwater Basin Total	15	61	76

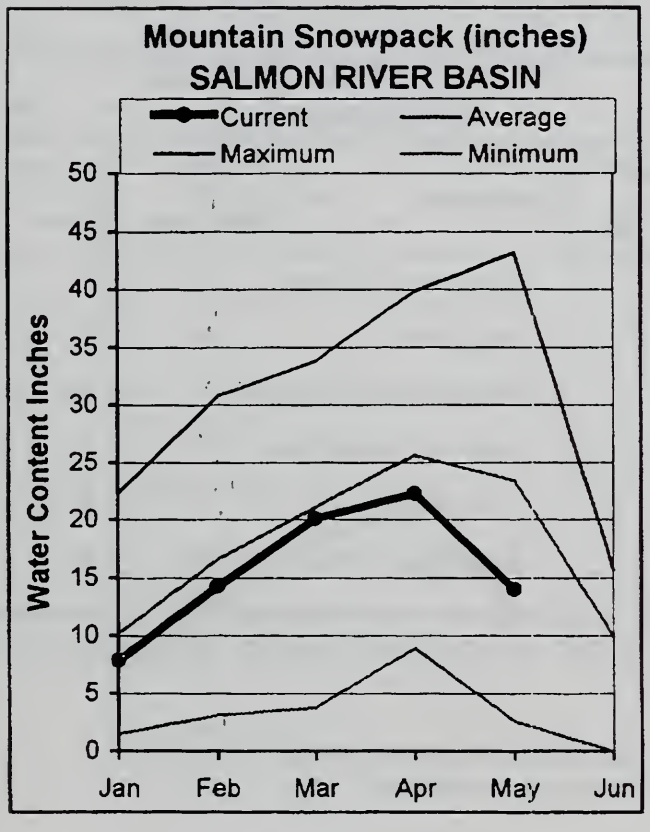
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

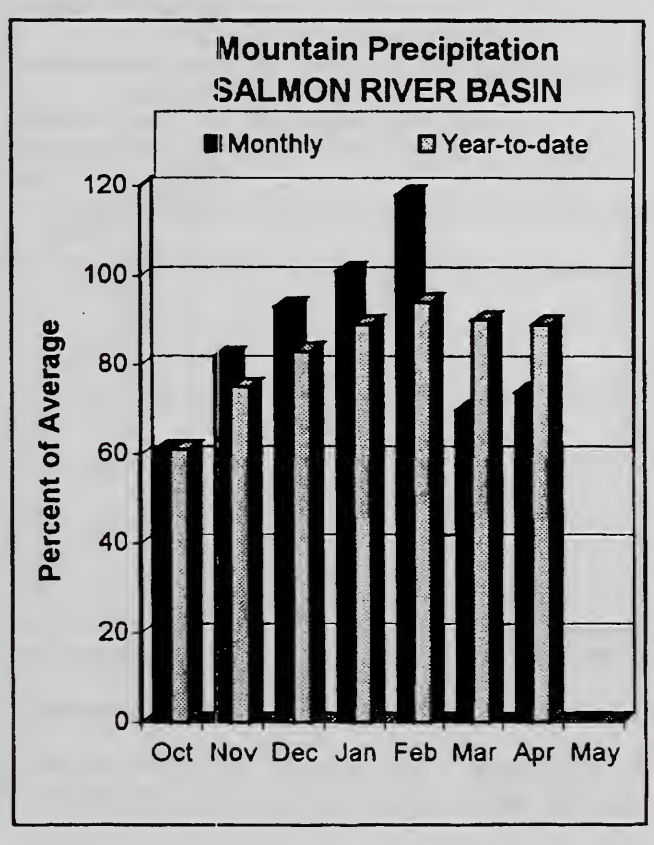
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN
MAY 1, 2000







WATER SUPPLY OUTLOOK

April precipitation was 74% of average. The total precipitation received since October 1 is 89% of average, which is the lowest water year total on May 1 since it was 63% in 1994. Snowpack in the Salmon basin ranges from 54% of average in the Middle Fork and Little Salmon basins to 64% in the Lemhi, South Fork Salmon and the Salmon basin above Salmon. Overall, the Salmon River basin snowpack is 61% of average. The Salmon River above Salmon forecast dropped from 90% of average last month to 76% for the May-September period. The Salmon River at White Bird is forecast at 84%. Moderate temperatures are bringing the snow off slowly and keeping flows at a moderate level. The Middle Fork River on average, peaks when the snow at Banner Summit SNOTEL site is about half-melted which occurred in early May. Additional peaks on the Middle Fork River are still possible, but they may be more dependent upon spring rains and less on the remaining snowpack. With a little rain from Mother Nature this summer, streamflow levels for boating should be adequate through the summer months.

SALMON RIVER BASIN
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<= Drier = Future Conditions = Wetter =>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	MAY-JUL	464	549	587	76	625	710	772
	MAY-SEP	562	657	700	76	743	838	922
SALMON at White Bird (1)	MAY-JUL	3650	4179	4420	84	4661	5190	5284
	MAY-SEP	4051	4650	4922	83	5194	5793	5930

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - May 1, 2000

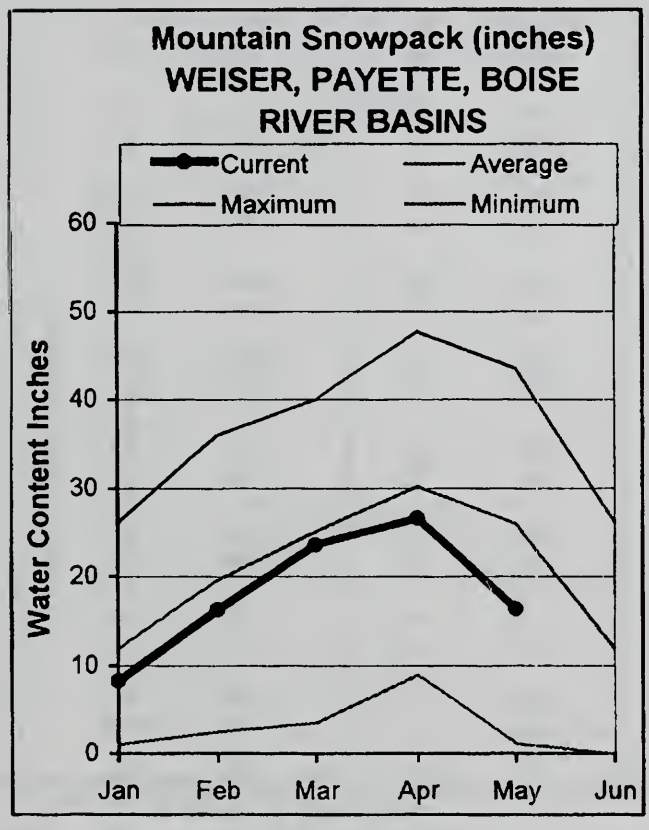
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	7	51	61
Lemhi River	6	56	65
Middle Fork Salmon River	3	48	55
South Fork Salmon River	3	51	62
Little Salmon River	4	33	52
Salmon Basin Total	23	49	61

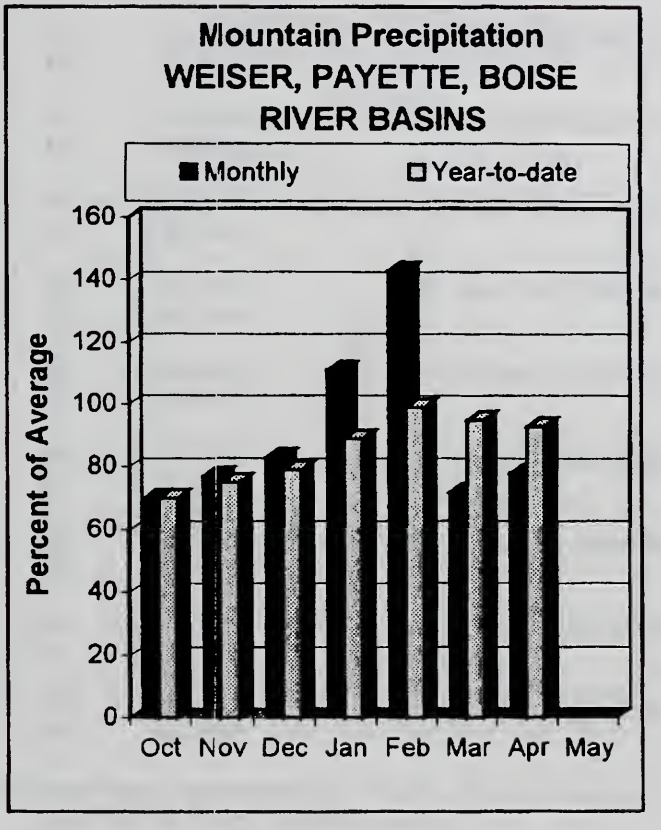
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS
MAY 1, 2000





WATER SUPPLY OUTLOOK

April precipitation was about three-quarters of normal for the second month in a row. Precipitation for the water year is 93% of normal. Early melt has decreased the snowpack percentages significantly from a month ago; even the higher elevation snowpack above 8,000 feet are melting. Snowpack percentages are 41% of average in the Weiser basin, 61% in the Payette basin, and 68% in the Boise basin. A snowline reconnaissance flight shows there is an intermittent snowpack above 6,000 feet and more permanent snowpack above 7,2000 feet. The Bureau of Reclamation is currently reducing the outflow from Lucky Peak Reservoir to meet current irrigation demand and ensure filling the Boise Reservoir System. As of April 30, the Boise Reservoir System was 86% full, 124% of average. The Payette Reservoir System was 81% full, 131% of average. Streamflow forecasts have decreased from last month and now range from 65-85% of average. Water supplies will be adequate in these west-central basins.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<== Drier == Future Conditions == Wetter ==>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER nr Weiser (1)	MAY-JUL	112	183	215	86	247	318	250
	MAY-SEP	131	206	240	86	274	349	279
SF PAYETTE at Lowman	MAY-JUL	245	270	287	77	304	329	375
	MAY-SEP	289	316	334	78	352	379	431
DEADWOOD RESERVOIR Inflow (1,2)	MAY-JUL	76	91	98	82	105	120	120
	MAY-SEP	81	97	104	82	111	127	127
LAKE FORK PAYETTE near McCall	MAY-JUL	40	46	50	66	54	60	76
	MAY-SEP	43	49	53	67	57	63	80
NF PAYETTE nr Cascade (1,2)	MAY-JUL	234	300	330	81	360	426	407
	MAY-SEP	257	328	360	81	392	463	442
NF PAYETTE nr Banks (2)	MAY-JUL	306	368	410	80	452	514	512
	MAY-SEP	333	400	446	81	492	559	554
PAYETTE nr Horseshoe Bend (1,2)	MAY-JUL	781	948	1024	79	1100	1267	1304
	MAY-SEP	874	1056	1139	79	1222	1404	1442
BOISE near Twin Springs (1)	MAY-JUL	280	339	366	72	393	452	509
	MAY-SEP	313	377	406	72	435	499	564
SF BOISE at Anderson Ranch Dam (1,2)	MAY-JUL	207	272	302	70	332	397	432
	MAY-SEP	227	296	328	70	360	429	469
MORES CREEK near Arrowrock Dam	MAY-JUL	28	39	47	61	55	66	77
	MAY-SEP	31	43	51	62	59	70	82
BOISE near Boise (1,2)	MAY-JUL	559	701	765	70	829	971	1090
	MAY-SEP	642	792	860	71	928	1078	1204

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	11.1	10.6	10.2
CASCADE	703.2	564.4	399.1	430.6
DEADWOOD	161.9	135.4	82.6	102.8
ANDERSON RANCH	464.2	367.2	274.2	327.0
ARROWROCK	286.6	274.3	115.5	204.0
LUCKY PEAK	293.2	260.3	148.0	195.5
LAKE LOWELL (DEER FLAT)	177.1	139.3	147.0	155.5

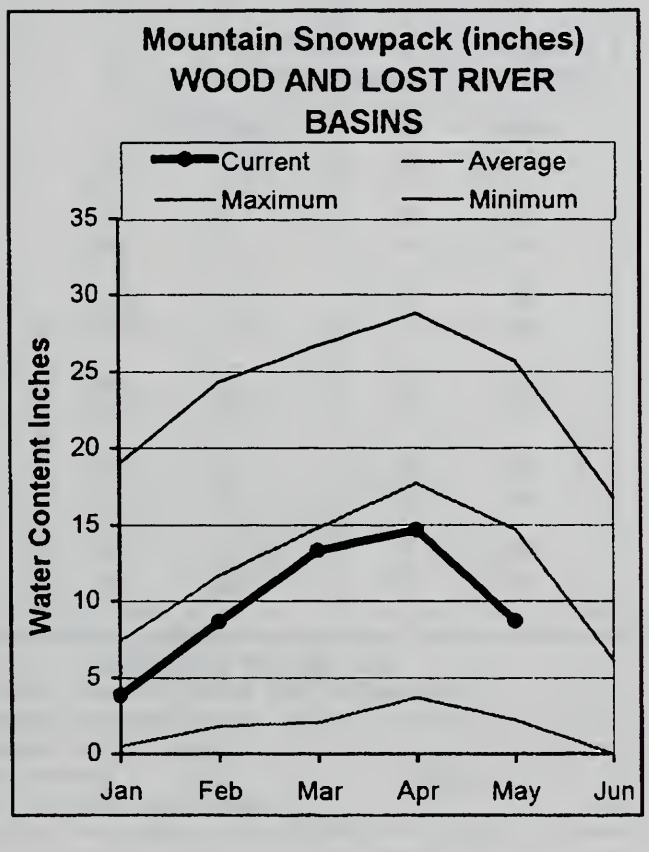
WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2000

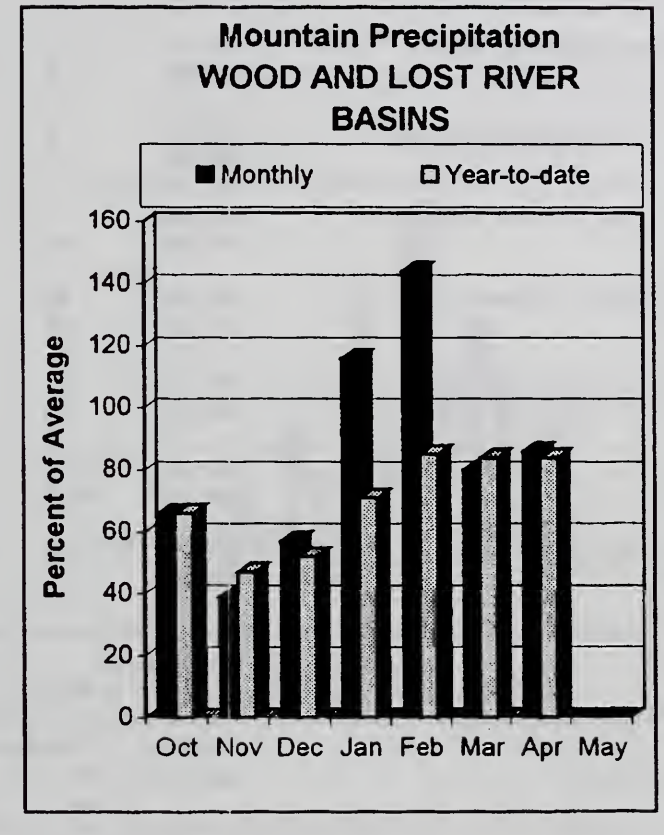
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	20	51
Weiser River	3	20	41
North Fork Payette	8	43	61
South Fork Payette	4	51	58
Payette Basin Total	13	46	61
Middle & North Fork Boise	6	60	69
South Fork Boise River	6	63	73
Mores Creek	4	42	60
Boise Basin Total	12	56	68
Canyon Creek	0	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WOOD and LOST RIVER BASINS
MAY 1, 2000





WATER SUPPLY OUTLOOK

An early melt and lack of runoff in these central Idaho basins have decreased the projected streamflow forecasts. Last month streamflow forecasts were in the 60-75% of average range, now forecasts call for 45-70% of average for the May-September period. Currently, Magic and Little Wood reservoirs are full while Mackay Reservoir is 88% full. The Surface Water Supply Index (SWSI) shows water supplies may be adequate for the Little Wood water users. However, the SWSI is at or below the Agricultural Shortage Level in the Big Wood, Big Lost and Little Lost basins. These users and other instream users in the Birch Creek and Mud Lake area could experience shortages later this summer. Snow survey measurements in Copper Basin and Birch Creek Basin the last week of April showed an intermittent snowpack above 7,500 feet and more permanent snowpack above 7,900 feet. As of May 5, Lost-Wood Divide SNOTEL site has the least amount of snow water since 1994. Snowpacks are 65% of average in the Big Wood, Little Wood and Big Lost basins. Snowpack is 49% of average in the Little Lost basin and 38% in Camas Creek basin. Precipitation was 86% of average in April and remains at 84% for the water year. Water users should be prepared for possible shortages, especially if the dry conditions persist through the summer growing season.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<= Drier = Future Conditions = Wetter =>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	MAY-JUL	85	106	116	52	127	151	224
	MAY-SEP	100	123	134	52	145	172	257
BIG WOOD near Bellevue	MAY-JUL	44	56	65	42	75	90	156
	MAY-SEP	51	64	74	44	84	101	170
CAMAS CREEK near Blaine	MAY-JUL	11.1	15.0	18.0	43	21	27	42
	MAY-SEP	11.5	15.5	18.6	44	22	27	43
BIG WOOD below Magic Dam (2)	MAY-JUL	45	71	89	44	107	133	201
	MAY-SEP	47	76	95	44	114	143	216
LITTLE WOOD near Carey (2)	MAY-JUL	21	31	39	59	46	57	65
	MAY-SEP	25	36	44	60	52	63	73
BIG LOST at Howell Ranch	MAY-JUL	83	97	107	63	117	131	169
	MAY-SEP	97	114	125	64	136	153	195
BIG LOST below Mackay Reservoir (2)	MAY-JUL	58	72	82	59	92	106	139
	MAY-SEP	80	96	106	62	116	132	171
LITTLE LOST blw Wet Creek	MAY-JUL	13.2	17.3	20	74	23	27	27
	MAY-SEP	16.8	22	26	73	29	35	35
LITTLE LOST nr Howe	MAY-JUL	16.6	18.6	20	74	21	23	27
	MAY-SEP	22	26	28	73	30	33	38

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	189.2	179.9	159.9
LITTLE WOOD	30.0	29.8	20.1	25.2
MACKAY	44.4	39.2	30.4	34.3

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - May 1, 2000

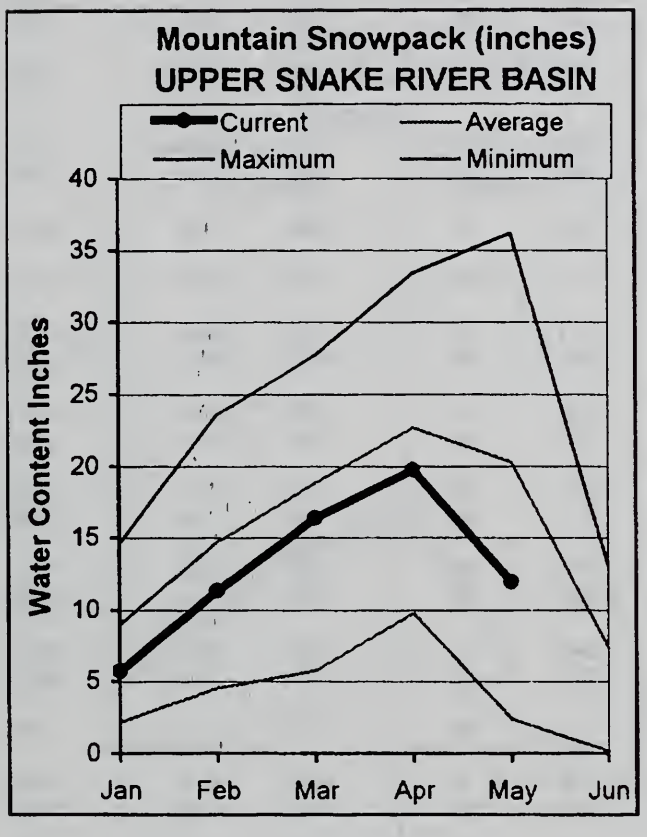
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Big Wood ab Magic	7	53	64
Camas Creek	2	29	38
Big Wood Basin Total	9	53	62
Little Wood River	4	56	69
Fish Creek	0	0	0
Big Lost River	5	54	64
Little Lost River	3	44	49
Birch-Medicine Lodge Cree	2	45	62

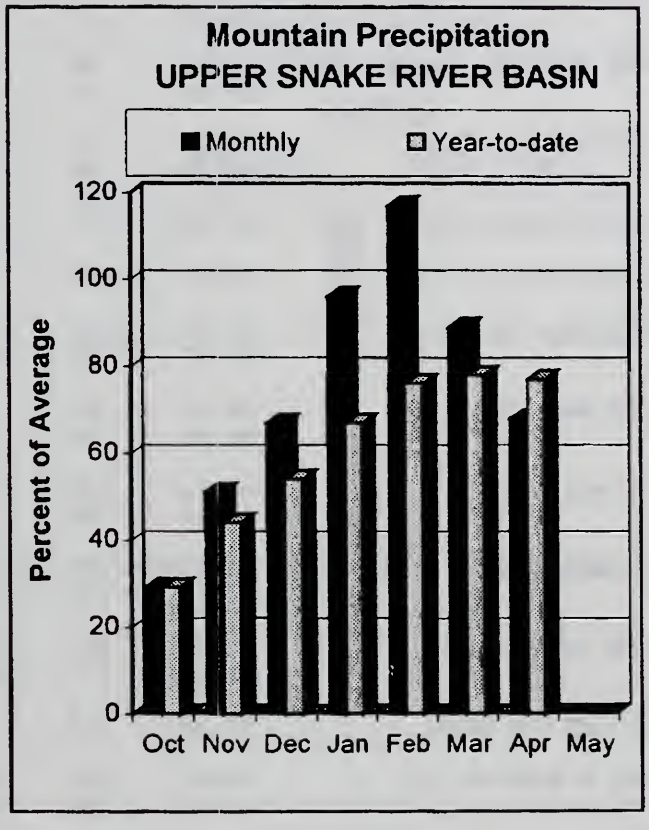
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE RIVER BASIN
MAY 1, 2000





WATER SUPPLY OUTLOOK

April precipitation was 68% of average. Water year to date precipitation is 77% of average. The snowpack in the Willow and Blackfoot basins has melted and is the earliest melt since 1992. The Henrys Fork snowpack is 55% of average. The Snake River above Palisades Reservoir snowpack is 57% of average, while the Snake River above American Falls Reservoir is only 49%. Streamflow forecasts range from 85% of average in the Henrys Fork, Falls, and Teton rivers to 55% in the Blackfoot and Potneuf basins. The Snake River near Heise is forecast at three-quarters of normal. Reservoir storage is in good shape, 91% of capacity for the 8 major reservoirs, and will help provide adequate water supplies for the numerous Snake River water users.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<= Drier = Future Conditions = Wetter =>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK near Ashton (2)	MAY-JUL	303	347	377	87	407	451	432
	MAY-SEP	467	521	558	90	595	649	618
HENRYS FORK near Rexburg (2)	MAY-JUL	697	800	870	86	940	1043	1016
	MAY-SEP	950	1069	1150	86	1231	1350	1339
FALLS near Squirrel (1,2)	MAY-JUL	214	259	280	87	301	346	322
	MAY-SEP	270	316	337	86	358	404	390
TETON near Driggs	MAY-JUL	90	105	115	89	125	140	130
	MAY-SEP	125	144	156	88	168	187	177
TETON near St. Anthony	MAY-JUL	236	266	287	87	308	338	330
	MAY-SEP	295	332	357	87	382	419	410
SNAKE near Moran (1,2)	MAY-SEP	515	602	642	79	682	769	814
PACIFIC CREEK at Moran	MAY-SEP	89	106	117	75	128	145	157
SNAKE above Palisades (2)	MAY-JUL	1451	1570	1650	78	1730	1849	2115
	MAY-SEP	1694	1835	1930	78	2025	2166	2475
GREYS above Palisades	MAY-JUL	162	183	198	67	213	234	295
	MAY-SEP	191	215	231	66	247	271	350
SALT near Etna	MAY-JUL	99	133	156	60	179	213	260
	MAY-SEP	154	192	217	64	242	280	339
PALISADES RESERVOIR INFLOW (1,2)	MAY-JUL	1800	2075	2200	76	2325	2600	2891
	MAY-SEP	2187	2505	2650	77	2795	3113	3428
SNAKE near Heise (2)	MAY-JUL	2004	2204	2340	76	2476	2676	3074
	MAY-SEP	2451	2682	2840	77	2998	3229	3672
BLACKFOOT RESV INFLOW	MAY-JUN	16.9	32	43	54	54	69	80
SNAKE nr Blackfoot (1,2)	MAY-JUL	2021	2684	2985	75	3286	3949	3981
	MAY-SEP	2724	3440	3765	75	4090	4806	5019
PORTNEUF at Topaz	MAY-JUL	17.0	24	29	53	34	41	55
	MAY-SEP	33	38	42	55	46	51	76
AMERICAN FALLS RESV INFLOW (1,2)	MAY-JUL	736	1406	1710	69	2014	2684	2463
	MAY-SEP	551	1410	1800	67	2190	3049	2700

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	88.7	84.9	82.3
ISLAND PARK	135.2	132.5	113.7	125.7
GRASSY LAKE	15.2	13.0	13.4	11.7
JACKSON LAKE	847.0	716.6	533.1	456.5
PALISADES	1400.0	1161.1	555.4	950.0
RIRIE	80.5	67.9	68.1	53.5
BLACKFOOT	348.7	306.5	288.4	273.0
AMERICAN FALLS	1672.6	1672.0	1571.1	1547.0

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - May 1, 2000

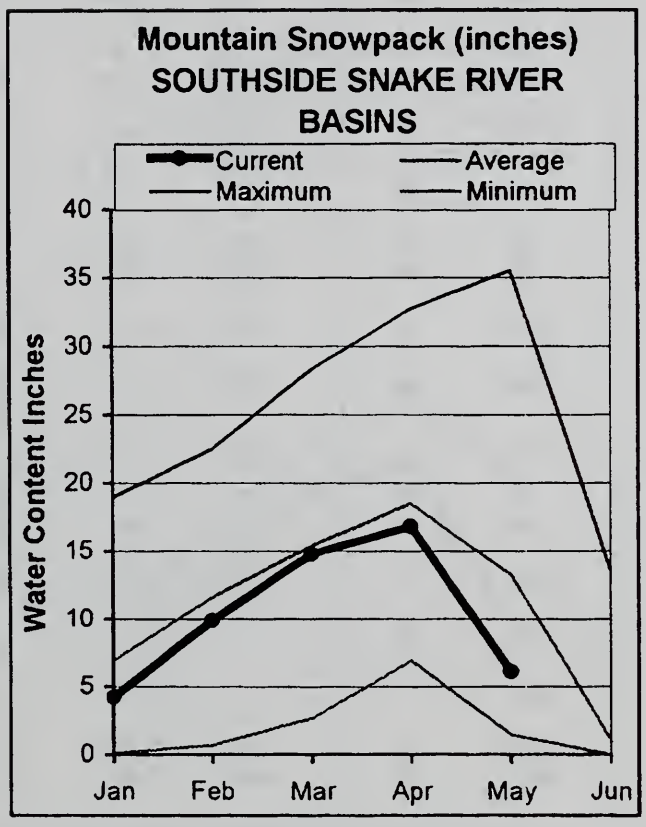
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Camas-Beaver Creeks	2	24	35
Henrys Fork-Falls River	10	45	56
Teton River	8	48	54
Henrys Fork above Rexburg	18	46	55
Snake above Jackson Lake	6	45	54
Gros Ventre River	3	57	68
Hoback River	6	48	63
Greys River	4	63	73
Salt River	5	50	55
Snake above Palisades	25	48	57
Willow Creek	7	0	0
Blackfoot River	3	0	0
Portneuf River	5	21	33
Snake abv American Falls	37	41	49

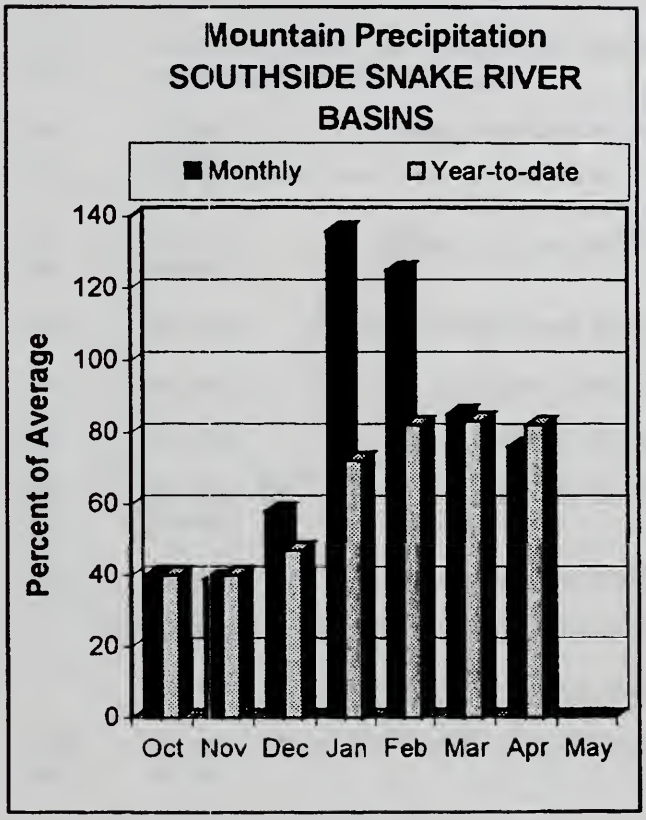
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table. The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS
MAY 1, 2000





WATER SUPPLY OUTLOOK

April precipitation was 76% of average and is 82% for the water year. The snowpack is 37% of average in the Salmon Falls and Oakley basins and slightly better in the Bruneau basin at 45%. The Owyhee basin is nearly melted-out and about the same as last year at 16% of average. The Owyhee River and Bruneau River peaked in April, any future streamflow peaks are dependent upon spring rains and less on snow melt. With more than half the snow melted in Salmon Falls, Goose and Trapper basins, streamflow levels rose some but not as much as expected. Water managers are waiting for a second rise which will only come with additional spring rains. Salmon Falls Reservoir is less than half full while Oakley Reservoir is 60% full. Wildhorse, Brownlee and Owyhee reservoirs are about 85% full. Owyhee Reservoir water users will have an adequate supply. The Surface Water Supply Index is near the Agricultural Shortage Threshold level in Salmon Falls and Oakley basins. Water shortages may occur especially if runoff is in the Drier Forecast range, 70% or 90% Chance of Exceeding.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESV INFLOW	MAY-JUL	4.2	6.3	7.9	40	9.7	12.8	20
	MAY-SEP	5.8	8.2	10.0	43	12.0	15.3	23
OAKLEY RESV STORAGE	MAY-31	38	41	43	105	44	47	41
	JUN-30	24	28	32	86	35	39	37
SALMON FALLS CREEK nr San Jacinto	MAY-JUL	12.9	18.5	23	40	28	36	57
	MAY-SEP	15.4	21	26	42	31	40	62
SALMON FALLS RESV STORAGE	MAY-31	60	67	71	76	76	83	93
	JUN-30	30	42	50	56	58	70	89
	JUL-31	4.1	15.4	23	36	31	42	64
BRUNEAU near Hot Springs	MAY-JUL	50	70	86	53	103	131	162
	MAY-SEP	56	77	94	54	112	142	173
OWYHEE near Gold Creek (2)	MAY-JUL	0.2	1.7	3.5	29	6.0	10.8	12.2
OWYHEE nr Owyhee (2)	MAY-JUL	1.9	17.3	28	48	38	54	58
OWYHEE near Rome	MAY-JUL	35	50	62	31	75	97	200
OWYHEE RESV INFLOW (2)	MAY-JUL	48	64	76	36	89	111	210
	MAY-SEP	68	87	101	42	116	141	238
SUCCOR CK nr Jordan Valley	MAY-JUL	-0.49	2.12	3.90	77	5.68	8.29	5.10
SNAKE RIVER at Weiser (1,2)	MAY-JUL			2160	57			3793
SNAKE RIVER at Hells Canyon Dam (1,2	MAY-JUL			2510	59			4276
SNAKE blw Lower Granite Dam (1,2)	MAY-JUL	10210	12472	13500	80	14528	16790	16940
	MAY-SEP	11995	14612	15800	80	16988	19605	19650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	74.5	44.7	53.0	38.0
SALMON FALLS	182.6	75.0	100.8	81.9
WILDHORSE RESERVOIR	71.5	62.4	70.1	47.2
OWYHEE	715.0	631.9	719.1	619.0
BROWNLEE	1419.3	1145.8	543.6	1007.0

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	52	81
Goose-Trapper Creeks	4	27	37
Salmon Falls Creek	6	33	37
Bruneau River	5	46	45
Owyhee Basin Total	7	14	16

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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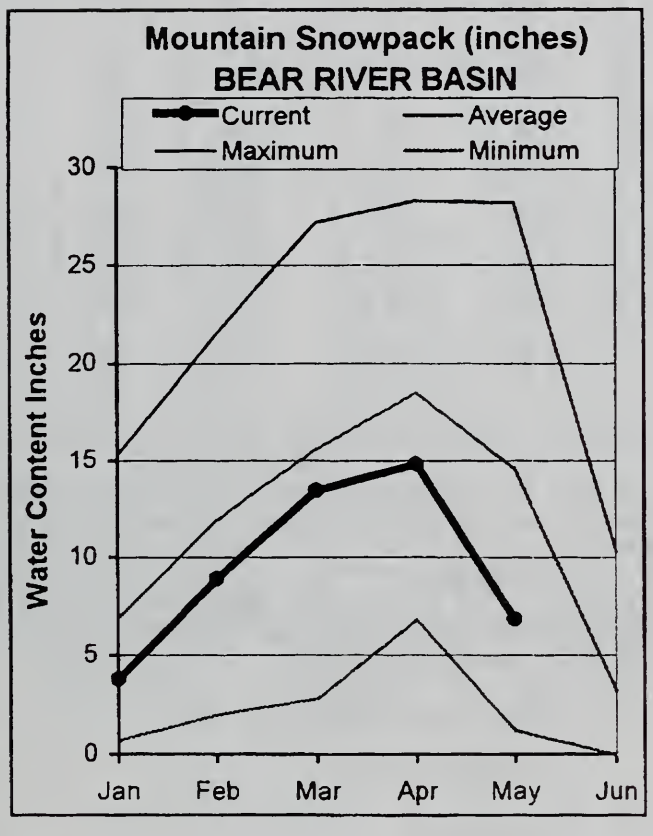
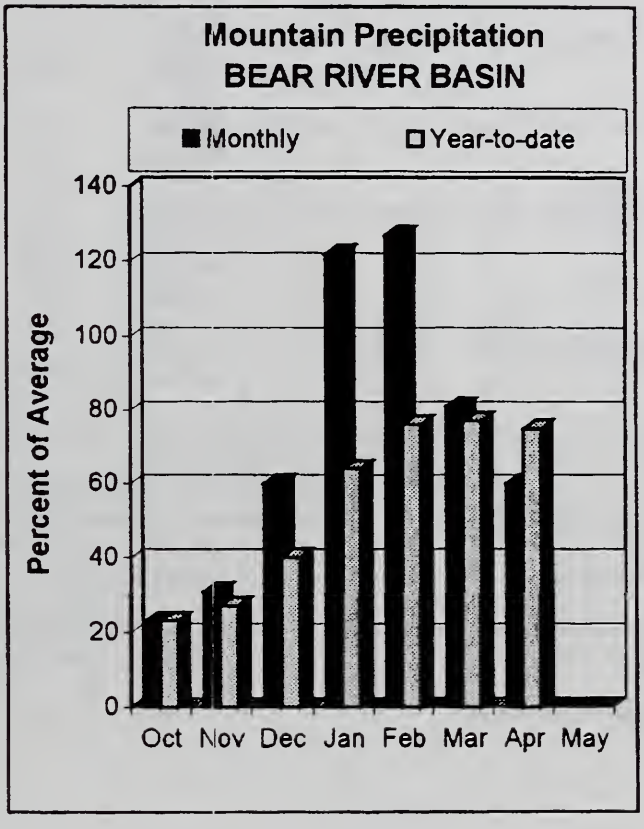
BEAR RIVER BASIN
MAY 1, 2000





WATER SUPPLY OUTLOOK

April precipitation was 60% of average, the lowest in the state. Precipitation for the water year is also near the lowest in the state at 75% of average. Snowpack percentages range from 36% of average for Mink Creek to 73% for Cub River. Overall, the Bear River basin is half of normal for this time of year. The good news is Montpelier Creek Reservoir is 88% full and Bear Lake is 80% full. The bad news is streamflow forecasts decreased from last month and now call for 50-60% of average runoff volumes. Water users that rely on reservoir storage should have an adequate water supply. Instream water users will see an earlier return to baseflow levels as a result of the below normal winter precipitation.

BEAR RIVER BASIN
Streamflow Forecasts - May 1, 2000

Forecast Point	Forecast Period	<<= Drier = Future Conditions = Wetter =>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BEAR R nr Randolph, UT	MAY-JUL	9.6	37	55	63	73	100	88
	MAY-SEP	7.7	39	60	62	81	112	97
SMITHS FK nr Border, WY	MAY-JUL	43	50	56	61	62	73	92
	MAY-SEP	52	60	66	61	73	84	109
THOMAS FK nr WY-ID State Line (Disc.	MAY-JUL	9.3	12.3	15.0	56	18.2	24	27
	MAY-SEP	10.2	13.3	16.0	53	19.2	25	30
BEAR R blw Stewart Dam nr Montpelier	MAY-JUL	67	111	140	62	169	213	225
	MAY-SEP	75	126	160	61	194	245	264
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	4.7	5.7	6.6	54	7.6	9.3	12.2
	APR-SEP	5.5	6.7	7.6	54	8.6	10.4	14.2
	MAY-JUL	3.20	4.02	4.70	52	5.49	6.91	9.10
	MAY-SEP	3.9	4.8	5.5	52	6.3	7.8	10.6
CUB R nr Preston	APR-JUL	22	27	30	64	33	38	47
	MAY-JUL	18.9	24	27	63	30	35	43

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	1136.0	1145.4	1052.0
MONTPELIER CREEK	4.0	3.5	3.7	2.2

BEAR RIVER BASIN
Watershed Snowpack Analysis - May 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	52	62
Bear River ab WY-ID line	13	41	50
Montpelier Creek	2	55	56
Mink Creek	1	46	36
Cub River	1	50	73
Bear River ab ID-UT line	20	42	49
Malad River	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Streamflow Adjustment List For All Forecasts Published In Idaho Basin Outlook Report Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report. (Revised 1/2000).

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)

CLARK FORK AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)

PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE
+ PEND OREILLE LAKE (STORAGE CHANGE)

PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)

COEUR D'ALENE R AT ENAVILLE, ID - No Corrections

ST. JOE R AT CALDER, ID - No Corrections

SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)

SPOKANE R AT LONG LAKE, WA
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
+ LONG LAKE, WA (STORAGE CHANGE)

Clearwater River Basin

DWORSHAK RESERVOIR INFLOW, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
+ CLEARWATER R NR PECK, ID

CLEARWATER R AT OROFINO, ID - No Corrections

CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections

SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections

SF PAYETTE R AT LOWMAN, ID - No Corrections

DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)

LAKE FORK PAYETTE RIVER NR MCCALL, ID – No Corrections

NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)

NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)

PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)

BOISE R NR TWIN SPRINGS, ID - No Corrections

SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)

BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections

BIG WOOD R NR BELLEVUE, ID - No Corrections

BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)

LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)

BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections

BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)

LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections

LITTLE LOST R NR HOWE, ID - No Corrections (Disc)

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)

HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
+ GRASSY LAKE (STORAGE CHANGE)

FALLS R ABV YELLOWSTONE CANAL NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)

TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections

TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE

SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)

PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

SNAKE R NR HEISE, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

BLACKFOOT RESVERVOIR INFLOW, ID
+ BLACKFOOT RIVER
+ BLACKFOOT RESERVOIR (STORAGE CHANGE
SNAKE R NR BLACKFOOT, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
PORTNEUF R AT TOPAZ, ID - No Corrections
AMERICAN FALLS RESERVOIR INFLOW, ID
+ ALL CORRECTIONS MADE FOR HENRYS FK NR REXBURG, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT GAGES

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID
+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
+ TRAPPER CK NR OAKLEY, ID
SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
BRUNEAU R NR HOT SPRINGS, ID - No Corrections
OWYHEE R NR GOLD CK, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR OWYHEE, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR ROME, OR
+ WILDHORSE RESV (STORAGE CHANGE)
+ JORDAN VALLEY RESV (STORAGE CHANGE)
OWYHEE RESERVOIR INFLOW, OR
+ OWYHEE R BLW OWYHEE DAM, OR
+ OWYHEE RESV (STORAGE CHANGE)
+ DIV TO NORTH AND SOUTH CANALS
SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
SNAKE R - KING HILL, ID - No Corrections
SNAKE R NR MURPHY, ID - No Corrections
SNAKE R AT WEISER, ID - No Corrections
SNAKE R AT HELLS CANYON DAM, ID
+ BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
SMITHS FORK NR BORDER, WY - No Corrections
THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
BEAR R BLW STEWART DAM, ID
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
+ DINGLE INLET CANAL
+ RAINBOW INLET CANAL
MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)
+ MONTPELIER CK RESV (STORAGE CHANGE)
CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)

Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. (Revised October 1998)

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS CAPACITY INCLUDES
PANHANDLE REGION						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD+INACTIVE+ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE+ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD+INACTIVE+ACTIVE
CLEARWATER BASIN						
DWORSHAK	--	1452.00	2016.00	--	3468.0	INACTIVE+ACTIVE
WEISER/BOISE/PAYETTE BASINS						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	50.00	653.20	--	703.2	INACTIVE+ACTIVE
DEADWOOD	1.50	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	29.00	41.00	423.18	--	464.2	INACTIVE+ACTIVE
ARROWROCK	--	--	286.60	--	286.6	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE+ACTIVE
LAKE LOWELL	--	8.00	169.10	--	177.1	INACTIVE+ACTIVE
WOOD/LOST BASINS						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
UPPER SNAKE BASIN						
HENRYS LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE+SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD+INACTIVE+ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
SOUTHSIDE SNAKE BASINS						
OAKLEY	--	--	74.50	--	74.5	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE+ACTIVE
BEAR RIVER BASIN						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD+ACTIVE

Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflovv forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations, There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value.
There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value.
There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than thus forecast value.

10 Percent Chance of Exceeding Forecast. there is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Death between March I and July 31.

Using the Higher Exceedence Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

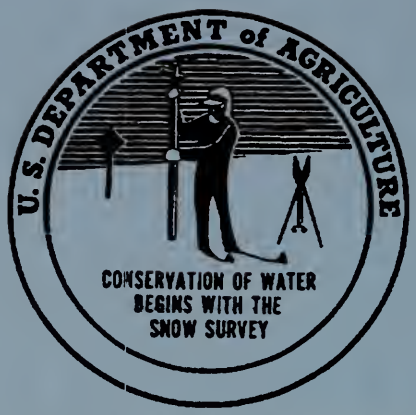
Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three Out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	109	528	613	432
	APR-SEP	369	459	521	107	583	673	488
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	109	760	927	631
	APR-SEP	495	670	750	109	830	1005	

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts" or visit our Web page.



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